Complete Summary

TITLE

Avoidance of antibiotic treatment in adults with acute bronchitis: percentage of adults 18 to 64 years of age with a diagnosis of acute bronchitis who were not dispensed an antibiotic prescription.

SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS® 2010: Healthcare Effectiveness Data & Information Set. Vol. 1, Narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2009 Jul. 90 p.

National Committee for Quality Assurance (NCQA). HEDIS® 2010: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2009 Jul. 417 p.

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the Measure Validity page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of adults 18 to 64 years of age with a diagnosis of acute bronchitis who were not* dispensed an antibiotic prescription on or three days after the Index Episode Start Date.

*This measure is reported as an inverted rate [1 - (numerator/eligible population)]. A higher rate indicates appropriate treatment of adults with acute bronchitis (i.e., proportion for whom antibiotics were *not* prescribed).

RATIONALE

Antibiotics are most often inappropriately prescribed for adults with acute bronchitis. This measure assesses whether antibiotics were inappropriately prescribed for healthy adults 18-64 years of age with bronchitis, and builds on an existing HEDIS measure that targets inappropriate antibiotic prescribing for children with upper respiratory infection (URI). See the related National Quality Measures Clearinghouse (NQMC) summary of the National Committee for Quality Assurance (NCQA) measure, Appropriate treatment for children with upper respiratory infection (URI): percentage of children 3 months to 18 years of age who were given a diagnosis of URI and were not dispensed an antibiotic prescription.

Antibiotics are not indicated in clinical guidelines for treating adults with acute bronchitis who do not have a comorbidity or other infection for which antibiotics may be appropriate. Inappropriate antibiotic treatment of adults with acute bronchitis is of clinical concern, especially since misuse and overuse of antibiotics lead to antibiotic drug resistance. Acute bronchitis consistently ranks among the 10 conditions that account for the most ambulatory office visits to U.S. physicians; furthermore, despite that the vast majority of acute bronchitis cases (more than 90 percent) have a nonbacterial cause, antibiotics are prescribed 65 percent to 80 percent of the time.

PRIMARY CLINICAL COMPONENT

Acute bronchitis; antibiotic treatment

DENOMINATOR DESCRIPTION

Health plan members 18 years of age as of January 1 of the year prior to the measurement to 64 years of age as of December 31 of the measurement year, with a Negative Medication History, a Negative Comorbid Condition History and a Negative Competing Diagnosis, who had an outpatient or emergency department (ED) visit with any diagnosis of acute bronchitis during the Intake Period (see the "Description of Case Finding" and the "Denominator Inclusions/Exclusions" fields in the Complete Summary)

NUMERATOR DESCRIPTION

Health plan members from the denominator who were dispensed prescription for antibiotic medication (refer to Table AAB-D in the original measure documentation for a list of antibiotic medications) on or three days after the Index Episode Start Date (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences

- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Overall poor quality for the performance measured
Use of this measure to improve performance
Variation in quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

National Committee for Quality Assurance (NCQA). The state of health care quality 2009. Washington (DC): National Committee for Quality Assurance (NCQA); 2009. 127 p.

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Accreditation
Decision-making by businesses about health-plan purchasing
Decision-making by consumers about health plan/provider choice
External oversight/Medicaid
External oversight/State government program
Internal quality improvement
National reporting

Application of Measure in its Current Use

CARE SETTING

Managed Care Plans

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Age 18 to 64 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

- About 5 percent of adults report an episode of acute bronchitis each year; 90 percent seek treatment. Only 1 in 10 cases are bacterial, antibiotic treatment is rarely warranted for this condition.
- About 80 percent of antibiotics prescribed for acute respiratory infections in adults are unnecessary, according to Centers for Disease Control and Prevention (CDC) prevention guidelines.
- In 2002, antibiotics were prescribed in 49 percent of U.S. adult acute bronchitis cases despite its typically viral origin.

EVIDENCE FOR INCIDENCE/PREVALENCE

Braman SS. Chronic cough due to acute bronchitis: ACCP evidence-based clinical practice guidelines. Chest2006 Jan;129(1 Suppl):95S-103S. [66 references] PubMed

Gonzales R, Bartlett JG, Besser RE, Cooper RJ, Hickner JM, Hoffman JR, Sande MA, American Academy of Family Physicians, American College of Physicians-American Society of Internal Medicine, Centers for Disease Control, Infectious Diseases Society of America. Principles of appropriate antibiotic use for treatment of uncomplicated acute bronchitis: background. Ann Intern Med2001 Mar 20;134(6):521-9. PubMed

Roumie CL, Halasa NB, Grijalva CG, Edwards KM, Zhu Y, Dittus RS, Griffin MR. Trends in antibiotic prescribing for adults in the United States--1995 to 2002. J Gen Intern Med2005 Aug;20(8):697-702. PubMed

Scott JG, Cohen D, DiCicco-Bloom B, Orzano AJ, Jaen CR, Crabtree BF. Antibiotic use in acute respiratory infections and the ways patients pressure physicians for a prescription. J Fam Pract2001 Oct;50(10):853-8. PubMed

ASSOCIATION WITH VULNERABLE POPULATIONS

The misuse and overuse of antibiotics contributes to antibiotic drug resistance, which is of worldwide public health concern due to the diminished efficacy of antibiotics against bacterial infections, particularly in sick patients and the elderly.

EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS

Amsden GW. Pneumococcal macrolide resistance--myth or reality?. J Antimicrob Chemother1999 Jul;44(1):1-6. [40 references] PubMed

Feikin DR, Schuchat A, Kolczak M, Barrett NL, Harrison LH, Lefkowitz L, McGeer A, Farley MM, Vugia DJ, Lexau C, Stefonek KR, Patterson JE, Jorgensen JH. Mortality from invasive pneumococcal pneumonia in the era of antibiotic resistance, 1995-1997. Am J Public Health2000 Feb;90(2):223-9. PubMed

Scott JG, Cohen D, DiCicco-Bloom B, Orzano AJ, Jaen CR, Crabtree BF. Antibiotic use in acute respiratory infections and the ways patients pressure physicians for a prescription. J Fam Pract2001 Oct;50(10):853-8. PubMed

BURDEN OF ILLNESS

Inappropriate antibiotic treatment can lead to adverse side effects, such as nausea, vomiting, headaches and rashes.

EVIDENCE FOR BURDEN OF ILLNESS

Chandran R. Should we prescribe antibiotics for acute bronchitis?. Am Fam Physician2001 Jul 1;64(1):135-8. PubMed

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Health plan members 18 years of age as of January 1 of the year prior to the measurement to 64 years of age as of December 31 of the measurement year who were continuously enrolled one year prior to the Episode Date* through 7 days after the Episode Date (inclusive). No more than one gap of 45 days is permitted from 365 days prior to through 7 days after the Episode Date (commercial) and a one-month gap in coverage (Medicaid).

**Episode Date*. The date of service for any outpatient or emergency department (ED) visit (refer to Table AAB-B in the original measure documentation for codes to identify visit type) during the Intake Period with any diagnosis of acute bronchitis (refer to Table AAB-A in the original measure documentation for codes to identify acute bronchitis).

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Health plan members 18 years of age as of January 1 of the year prior to the measurement to 64 years of age as of December 31 of the measurement year, with a Negative Medication History*, a Negative Comorbid Condition History* and a Negative Competing Diagnosis*, who had an outpatient or emergency department (ED) visit with any diagnosis of acute bronchitis during the Intake Period*

***Note**:

Negative Medication History. To qualify for Negative Medication History, the following criteria must be met.

- A period of 30 days prior to the Episode Date, during which time the member had no pharmacy claims for either new or refill prescriptions for a listed antibiotic drug.
- No prescriptions filled more than 30 days prior to the Episode Date that are active on the Episode Date (refer to Table AAB-D in the original measure documentation for a list of antibiotic medications).

A prescription is **active** if the "days supply" indicated on the date the member filled the prescription is the number of days or more between that date and the relevant service date. The 30-day look back period for pharmacy data includes the 30 days prior to the Intake Period.

Negative Comorbid Condition History. A period of 12 months prior to and including the Episode Date, during which time the member had no claims/encounters containing either a principal or secondary diagnosis for a comorbid condition (refer to Table AAB-C in the original measure documentation for codes to identify Comorbid conditions).

Negative Competing Diagnosis History. A period of 30 days prior to through 7 days after the Episode Date (inclusive), during which time the member had no claims/encounters with any competing diagnosis (refer to Table URI-C in the original measure documentation for codes to identify competing diagnoses).

Intake Period. January 1 to December 24 of the measurement year. The Intake Period captures eligible episodes of treatment.

Refer to the original measure documentation for steps to identify the eligible population.

Exclusions

- Do not include ED visits that result in an inpatient admission.
- *Test for Negative Comorbid Condition History*. Exclude Episode Dates for which the member had a claim/encounter with a diagnosis for a comorbid condition during the 12 months prior to or on the Episode Date (refer to Table AAB-C in the original measure documentation).
- *Test for Negative Medication History*. Exclude Episode Dates where a new or refill prescription for an antibiotic medication was filled 30 days prior to the Episode Date or was active on the Episode Date (refer to Table AAB-D in the original measure documentation).
- *Test for Negative Competing Diagnosis*. Exclude Episode Dates where during the period 30 days prior to the Episode Date through 7 days after the Episode Date (inclusive) the member had a claim/encounter with any competing diagnosis (refer to Table URI-C in the original measure documentation).

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Encounter
Patient Characteristic

DENOMINATOR TIME WINDOW

Time window brackets index event

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Health plan members from the denominator who were dispensed prescription for antibiotic medication (refer to Table AAB-D in the original measure documentation for a list of antibiotic medications) on or three days after the Index Episode Start Date*

**Index Episode Start Date*: The earliest Episode Date during the Intake Period that meets all of the following criteria.

- 30-day Negative Medication History prior to the Episode Date (refer to Table AAB-D in the original measure documentation).
- A 12-month Negative Comorbid Condition History prior to and including the Episode Date (refer to Table AAB-C in the original measure documentation for codes to identify comorbid conditions).
- A Negative Competing Diagnosis during the 30 days prior to the Episode Date through 7 days after the Episode Date (inclusive) (refer to Table URI-C in the original measure documentation for codes to identify competing diagnoses).

- The member was continuously enrolled one year prior to the Episode Date through 7 days after the Episode Date.

Exclusions
Unspecified

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Pharmacy data

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Analysis by subgroup (stratification on patient factors, geographic factors, etc.)

DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

This measure requires that results are reported separately for the commercial and Medicaid product lines.

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Avoidance of antibiotic treatment in adults with acute bronchitis (AAB).

MEASURE COLLECTION

HEDIS® 2010: Health Plan Employer Data and Information Set

MEASURE SET NAME

Effectiveness of Care

MEASURE SUBSET NAME

Respiratory Conditions

DEVELOPER

National Committee for Quality Assurance

FUNDING SOURCE(S)

Unspecified

COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency

and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

ENDORSER

National Quality Forum

INCLUDED IN

Physician Quality Reporting Initiative

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2005 Jan

REVISION DATE

2009 Jul

MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: National Committee for Quality Assurance (NCQA). HEDIS® 2009: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2008 Jul. various p.

SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS® 2010: Healthcare Effectiveness Data & Information Set. Vol. 1, Narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2009 Jul. 90 p.

National Committee for Quality Assurance (NCQA). HEDIS® 2010: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2009 Jul. 417 p.

MEASURE AVAILABILITY

The individual measure, "Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis (AAB)," is published in "HEDIS® 2010. Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications."

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org.

COMPANION DOCUMENTS

The following is available:

- National Committee for Quality Assurance (NCQA). The state of health care quality 2009. Washington (DC): National Committee for Quality Assurance (NCQA); 2009. 127 p.

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org.

NQMC STATUS

This NQMC summary was completed by ECRI on June 6, 2006. The information was not verified by the measure developer. This NQMC Summary was updated by ECRI Institute on November 15, 2007. The information was not verified by the measure developer. This NQMC summary was updated by ECRI Institute on March 10, 2009. The information was verified by the measure developer on May 29, 2009. This NQMC summary was updated again by ECRI Institute on January 15, 2010.

COPYRIGHT STATEMENT

Disclaimer

NQMC DISCLAIMER

The National Quality Measures Clearinghouse™ (NQMC) does not develop, produce, approve, or endorse the measures represented on this site.

All measures summarized by NQMC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public and private organizations, other government agencies, health care organizations or plans, individuals, and similar entities.

Measures represented on the NQMC Web site are submitted by measure developers, and are screened solely to determine that they meet the NQMC

Inclusion Criteria which may be found at http://www.qualitymeasures.ahrq.gov/about/inclusion.aspx.

NQMC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or its reliability and/or validity of the quality measures and related materials represented on this site. The inclusion or hosting of measures in NQMC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding measure content are directed to contact the measure developer.

Date Modified: 5/24/2010